Clean Set of Claims

1. An orthogonal frequency division multiplexing (OFDM) signal frame sync signal generator, comprising:

a bandpass filter adapted to remove a digital portion of a signal corresponding to at least one digital channel from a received OFDM signal; and

an OFDM frame synchronizing correlator adapted to generate a frame sync signal based on a detected correlation of a cyclically extended portion of a data frame in said received OFDM signal after processing by said bandpass filter.

2. The OFDM signal frame sync signal generator according to claim 1, wherein:

said digital portion of said at least one digital channel is a portion in a frequency domain farthest from a center frequency of an analog channel contained in said received OFDM signal.

3. The OFDM signal frame sync signal generator according to claim 1, wherein:

said bandpass filter is adapted to significantly remove a digital portion of each of two digital channels from said received OFDM signal.

4. The OFDM signal frame sync signal generator according to claim 3, wherein:

said digital portion of said two digital channels are respective portions in a frequency domain farthest from a center frequency of an analog channel contained in said received OFDM signal.

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7. A method of detecting a timing of a data frame in a received orthogonal frequency division multiplexing (OFDM) signal, comprising:

filtering out a digital portion of a signal corresponding to at least one digital channel from said received OFDM signal to provide a bandpass filtered OFDM signal;

correlating a cyclically extended portion of a data frame in said bandpass filtered OFDM signal; and

generating a frame sync signal based on a correlation of said cyclically extended portion of said data frame.

10. Apparatus for detecting a timing of a data frame in a received orthogonal frequency division multiplexing (OFDM) signal, comprising:

means for filtering out a digital portion of a signal corresponding to at least one digital channel from said received OFDM signal to provide a bandpass filtered OFDM signal;

means for correlating a cyclically extended portion of a data frame in said bandpass filtered OFDM signal; and

means for generating a frame sync signal based on a correlation of said cyclically extended portion of said data frame.



Version with Markings to Show Changes Made

1. (Amended) An <u>orthogonal frequency division multiplexing</u> (OFDM) signal frame sync signal generator, comprising:

a bandpass filter adapted to remove a digital [significant] portion of a signal corresponding to at least one digital channel from a received OFDM signal; and

an OFDM frame synchronizing correlator adapted to generate a frame sync signal based on a detected correlation of a cyclically extended portion of a data frame in said received OFDM signal after processing by said bandpass filter.

2. (Amended) The OFDM signal frame sync signal generator according to claim 1, wherein:

said <u>digital</u> [significant] portion of said at least one digital channel is a portion in a frequency domain farthest from a center frequency of an analog channel contained in said received OFDM signal.

3. (Amended) The OFDM signal frame sync signal generator according to claim 1, wherein:

said bandpass filter is adapted to significantly remove a <u>digital</u> [significant] portion of each of two digital channels from said received OFDM signal.

4. (Amended) The OFDM signal frame sync signal generator according to claim 3, wherein:

said <u>digital</u> [significant] portion of said two digital channels are respective portions in a frequency domain farthest from a center frequency of an analog channel contained in said received OFDM signal.

7. (Amended) A method of detecting a timing of a data frame in a received <u>orthogonal frequency division multiplexing</u> (OFDM) signal, comprising:

filtering out a <u>digital</u> [significant] portion of a signal corresponding to at least one digital channel from said received OFDM signal to provide a bandpass filtered OFDM signal;

correlating a cyclically extended portion of a data frame in said bandpass filtered OFDM signal; and

generating a frame sync signal based on a correlation of said cyclically extended portion of said data frame.

10. (Amended) Apparatus for detecting a timing of a data frame in a received <u>orthogonal frequency division multiplexing (OFDM)</u> signal, comprising:

means for filtering out a <u>digital</u> [significant] portion of a signal corresponding to at least one digital channel from said received OFDM signal to provide a bandpass filtered OFDM signal;

means for correlating a cyclically extended portion of a data frame in said bandpass filtered OFDM signal; and

means for generating a frame sync signal based on a correlation of said cyclically extended portion of said data frame.